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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/626,714
Filing Date: July 25, 2003
Appellant(s): DUVAUT ET AL.

Daniel R. McClure
For Appellant

MAILED
OCT 17 2007
GROUP 2800

EXAMINER'S ANSWER

This is in response to the appeal brief filed July 16, 2007 appealing from the Office action mailed February 9, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. The claimed invention is directed to non-statutory subject matter. Claims 1-28 are directly related to non-statutory subject matter because the claimed subject matters of the independent claim 1 is directly related to non-statutory mathematical algorithms of an equation of a digital subscriber line (DSL) communications system configured to provide a power spectral density (PSD) mask for spectral shaping of a dual bit map (DBM) mode downstream transmission and the independent claim 15 is directly related to non-statutory mathematical algorithms of an equation of a digital subscriber line (DSL) communications system configured to provide a power spectral density (PSD) mask for spectral shaping of a far end cross talk (FEXT) bit map (FBM) mode downstream transmission.

The independent claims 1 and 15 are directly related to mathematical algorithms. If the "acts" of a claimed process manipulate only numbers, abstract concepts or ideas, or signals representing any of the foregoing, the acts are not being applied to appropriate subject matter. Benson, 409 U.S. at 71-72, 175 USPQ at 676. Thus, a process consisting solely of mathematical operations, i.e., converting one set of

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numbers into another set of numbers, does not manipulate appropriate subject matter and thus cannot constitute a statutory process.

In practical terms, claims define nonstatutory processes if they:

- consist solely of mathematical operations without some claimed practical application (i.e., executing a "mathematical algorithm"); or
- simply manipulate abstract ideas, e.g., a bit (Schrader, 22 F.3d at 293-94, 30 USPQ2d at 1458-59) or a bubble hierarchy (Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759), without some claimed practical application.

(10) Response to Argument

3. Regarding the appellant's arguments of *Parker v. Flook*, 437 U.S. 584 at 590 (1978), *Mackay Radio & Telegraph Co. v. Radio Corp. of America*, 306 U.S. 86 at 94 (1939), *In re Lowry*, 32 F.3d 1579 (Fed. Cir. 1994), and the Official Gazette Notice of November 22, 2205, Sections IV.A, IV.B, IV.C, and IV.C.2, the examiner has fully considered all features of the claims, including a digital subscriber line (DSL) communications system configured to provide a power spectral density (PSD) mask for spectral shaping of a dual bit map (DBM) mode downstream transmission as recited in claim 1 and a digital subscriber line (DSL) communications system configured to provide a power spectral density (PSD) mask for spectral shaping of a far end cross talk (FEXT) bit map (FBM) mode downstream transmission as recited in claim 15. The examiner also has consulted with the TC-specific 101 Help Panel on the matter of mathematical algorithms of claims 1 and 15. Therefore, the rejection of claims 1-28

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does comply with the examination guidelines for assessing claims under 35 U.S.C. § 101.

4. Regarding the appellant's arguments of the Federal Circuit's decision in In re Warmmerdam, 3 F.3d 1354 (Fed. Cir. 1994), claim 5 is statutory under 35 U.S.C. § 101 because claim 5 not only includes a machine, the machine also having a memory which contains [specific] data representing a bubble hierarchy generated by the method of claim 1. In contrast, claims 1 and 2 recite a digital subscriber line (DSL) communications system without claiming further element(s) or device(s) configured to provide a power spectral density (PSD) mask for spectral shaping of a dual bit map (DBM) mode or a far end cross talk (FEXT) bit map (FBM) mode downstream transmission by using the equation (mathematical algorithms). Therefore, claims 1-28 are non-statutory under 35 U.S.C. § 101.

5. Regarding the appellant's arguments of the U.S. Patent 7,167,548, again, claim 1 of the U.S. Patent 7,167,548 is statutory under 35 U.S.C. § 101 because claim 1 not only includes an apparatus, the apparatus comprises one or more processors and a memory, wherein the one or more processors is programmed or structured to perform mathematical algorithm, for example, the structures include establish an initial training section for a connection having a (specific) first bit rate and terminating on a modem, the initial training session established using [specific] initial default gain settings determined independently of actual power spectral density mask parameters that correspond to the modem and generate [specific] custom gain settings that are configured to vary the connection to include a [specific] second bit rate that is greater

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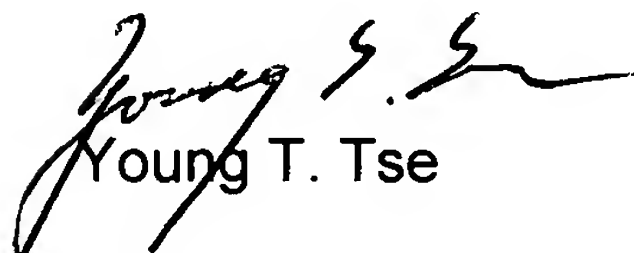
than the first bit rate. In this case, even though the claim recites a seemingly statutory apparatus (that is a computer with memory and a processor), the claim in reality provides patent protection for every substantial practical application of the mathematical algorithm itself. Therefore, the rejection of claims 1-28 is consistent with the examination methodology being carried out by the Patent Office in other applications and the U.S. Patent & Trademark Office treat all applicants equally and fairly.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



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